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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/177,815	10/23/1998	KYOUNG-SU KIM	1363.1004/MD	3622

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EXAMINER

BROWN, RUEBEN M

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/177,815

Applicant(s)

KIM ET AL.

Examiner

Reuben M. Brown

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 November 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-17 is/are allowed.
- 6) ☒ Claim(s) 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/29/2004 has been entered.

Response to Arguments

2. Applicant's arguments filed 6/15/2004, with respect to claims 18-20 have been fully considered but they are not persuasive. Applicant argues on page 10 that the claimed language of claim 18 recites that both analog and digital broadcasting signals can be received. Examiner agrees, but points out that the claim does not require that both analog and digital broadcasting signals are received, only that the receiver is enabled to receive both signals.

Applicant argues on page 11, that the known benefit achieved by Furumiya of using the color burst component to properly adjust the phase when converting to digital, is not relevant in Bestler, since the scan converter 70, operates on digital signals. Examiner respectfully disagrees

Art Unit: 2611

and points out that using the color burst component as discussed in Furumiya would in fact provide an improvement in Bestler, whenever the analog signals are converted to digital.

Applicant goes on to admit that this improvement would be more likely to appear at the A/D, but asserts that it would not be necessary since Bestler appears to operate properly. Examiner points out that whether or not Bestler operates properly is not the issue, but rather whether Furumiya would provide an improvement, and further would that improvement have been obvious to make. Examiner asserts that the answer to both of those queries is yes, Furumiya improves upon Bestler and it would have been an obvious improvement, for one of ordinary skill in the art at the time the invention was made.

As for applicant's discussion of the relevance of Choi and/or Furumiya with respect to when the signals are converted to digital or analog, examiner points out that claimed language is broad enough to read on changing to a digital channel to an analog channel and vice versa. Therefore both Choi and Furumiya are relevant for Bestler. As for the additional claimed feature of "synchronizing the phase of digital and analog signals 'upon' changing the selection between digital and analog signals", all of the cited references are directed to TV receivers, which therefore include channel changing means. Since different channels would broadcast in analog or digital, the instant feature is necessarily included.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bestler & Furumiya, and further in view of Choi, (U.S. Pat # 5,633,688).

Considering amended claim 18, the claimed broadcast receiver which receives a digital broadcasting signal and an analog broadcasting signal, comprising a tuning unit to selectively tune the digital or analog signal, is met by the operation of the hybrid analog/digital STB of Bestler, Abstract & col. 1, lines 5-41. The hybrid analog/digital STB of Bestler selectively receives and tunes either or both analog and digital TV signals; see col. 2, lines 3-11 & col. 4, lines 2-6.

As for the claimed processing unit to process the digital or analog broadcasting signals in accordance with the selection by the tuning unit, and to synchronize phases of the digital and analog broadcasting signals upon the tuning unit changing selection between the digital and analog broadcasting signals, Bestler teaches that the composite video signal from an analog TV signals is converted to a digital form and normalized, col. 3, lines 61-65). The normalizer 70

Art Unit: 2611

may comprise a scan converter that converts either or both an analog and digital signal to the desired display format. This is done to more accurately display a TV signal according to the desired display format, thereby appropriately increasing the perceived resolution to the desired display format; see col. 4, lines 6-24.

However, Bestler does not explicitly teach synchronizing the phase of the analog video signal. Nevertheless, Furumiya teaches a method synchronizing the phase of an analog video signal to the phase of a digital video signal. Furumiya disclose extracting the synchronous signal from an incoming video signal, such as its 3.58 MHz color burst and compensating for time-base error so that the video signal is properly displayed to the viewer, see col. 1, lines 12-15 & col. 3, lines 1-16. Specifically, the reference discloses separating the horizontal sync or burst component from an input analog signal and using this information to adjust the signal to a digital form. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Bestler to extract horizontal sync or color burst signals from an analog input signal for the well-known improvement of ensuring the colors of the analog signal is rendered in proper phase when displayed on a digital receiver.

Regarding the additional claimed feature of synchronizing the phase of a digital signal to an analog signal, Bestler does not teach such a technique. Nevertheless, Choi teaches synchronizing a digital image to an analog signal, see Abstract; col. 2, lines 50-56 & col. 8, lines 30-50. It would have been obvious for one of ordinary skill in the art at the time the invention was made, to modify Bestler with the technique of adjusting digital signal to an analog signal,

Art Unit: 2611

using the phase sync signal, for the desirable purpose of preventing distortion or degradation when displaying a digital signal on an analog receiver, as taught by Choi, col. 1, lines 18-45.

Regarding 'upon the tuning unit changing selection between digital and analog signals', as pointed out in the above discussion, Bestler and the other references receive broadcasts from multiple channels, and since these channels would alternatively contain analog or digital signals, the claimed feature is necessarily included in Bestler, Furumiya and/or Choi.

Considering claim 19, the claimed elements of a broadcast receiver corresponds with subject matter mentioned above in the rejection of claim 1, and is likewise treated.

Considering claim 20, the claimed features that correspond with subject matter mentioned above in the rejection of claim 18, are likewise analyzed. As for the additional claimed feature of a video mix unit to selectively input the output of the processed digital broadcasting signal with additional information and the processed analog broadcasting signal with the additional information, the disclosure of Bestler reads on this claimed feature, col. 4, lines 25-30. In particular, Bestler teaches that additional information such as text or graphics may accompany the video signals and are processed & mixed with the composite video signals by the mixer 64; see col. 3, lines 32-61. Bestler also teaches that the linear mixer 82 may be used to provide graphics or text that may be downloaded and stored in RAM analog video.

Regarding the further claimed limitation that the additional information corresponding to a digital broadcasting signal and the additional information corresponding to an analog broadcasting signal are the same, it also disclosed that the these text or graphics from OSD 60 or downloaded MPEG signal, may also be supplied to the digital broadcast signal, see col. 3, lines 32-54, as well as the analog TV signals, col. 3, lines 55-60.

Allowable Subject Matter

5. Claims 1-17 are allowed over prior art of record.

Art Unit: 2611

Any response to this action should be mailed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
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or faxed to:

(703) 872-9306, (for formal communications intended for entry)

Or:

(571) 273-7290 (for informal or draft communications, please label
"PROPOSED" or "DRAFT")

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reuben M. Brown whose telephone number is (571) 272-7290. The examiner can normally be reached on M-F (9:00-6:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Grant can be reached on (571) 272-7294. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9306 for regular communications and After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Reuben M. Brown

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REUBEN M. BROWN
PATENT EXAMINER